

ABSTRACT

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~~It is an object of the present invention to provide a~~
 composite material ^{is provided, which has a} having low thermal expansivity, ^a high
 thermal conductivity, and ^a good plastic workability, which
 composite material may be ^{is} applied to semiconductor devices and many other uses.

← The composite material is composed of metal and
 inorganic particles having a smaller coefficient of thermal
 expansion than said metal. It is characterized in that
 said inorganic particles disperse^d in such a way that 95% or
 more of them (in terms of their area in cross-section) form
 aggregates of complex configuration join^{ed} together.

← The composite material contains 20-80 vol% of copper
 oxide, with the remainder being copper. It has a
 coefficient of thermal expansion of 5×10^{-6} to $14 \times 10^{-6}/^{\circ}\text{C}$
 and thermal conductivity of 30-325 W/m·K in the range of room
 temperature to 300°C. It is suitable for the radiator plate
 of semiconductor devices and the dielectric plate of
 electrostatic attractors.

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